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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/907,021	07/17/2001	George L. Markley	DKT 00040	6078
7590 03/25/2004			EXAMINER	
Borg Warner Inc. Powertrain Technical Center, Patent Department 3800 Automation Avenue, Suite 100 Auburn Hills, MI 48326			MCANULTY, TIMOTHY P	
			ART UNIT	PAPER NUMBER
			3682	
			DATE MAILED: 03/25/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/907,021

Applicant(s)

MARKLEY ET AL.

Examiner

Timothy P McNulty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8,11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,8,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1,4,5,11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luce in view of Belcher.

Regarding claims 1-9, Luce discloses in figures 1 and 2, a sprocket and power transmission chain comprising a sprocket engaging a transmission chain, said sprocket having a plurality of series of teeth 3,4 wherein teeth of axially adjacent series are circumferentially offset from each other and a transmission chain having a first series of links having drive links and guide links and a second series of links having drive links and guide links wherein the first series and the second series are interleaved along a chain direction so that links of the second series are positioned between and extending adjacent to links of the first series. Luce further discloses the links of the first series and the links of the second series pivotally connected to one another via pins extending through apertures in each link but does not disclose said drive links defining teeth on a first side of said drive links and drive flanks on a second side opposite of said first side of said drive links. However, Belcher et al. teaches in figures 1-4, a transmission chain comprising drive links wherein each drive link defines teeth 5 on a first side of said drive link and includes two drive flanks (not numbered) on a second side opposite said first side of drive link. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Luce in view of the teachings of Belcher et al. to include teeth on a first side of the drive links to more securely engage the transmission chain to the sprocket and to include drive flanks on the drive links on a side opposite a side defining teeth so

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as to enable the transmission chain to drive sprockets with both a first toothed side of the chain and a second drive flanked side of the chain.

Regarding claims 11 and 12, there is reason to believe, based on the similarity of material and structure, that the functional limitation that the drive links provide uniform stiffness across the row of links may be an inherent characteristic of the reference combination set forth above. [W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. *In re Best*, 562 F.2d 1252, 195 USPQ 430, 433 (CCPA 1977). Accordingly, the burden is placed upon the applicant to prove that such a limitation is not an inherent characteristic of the reference combination.

3. Claims 1,4-6,8,11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luce in view of Kozakura et al.

Regarding claims Luce discloses in figures 1 and 2, a sprocket and power transmission chain comprising a sprocket engaging a transmission chain, said sprocket having a plurality of series of teeth 3,4 wherein teeth of axially adjacent series are circumferentially offset from each other and a transmission chain having a first series of links having drive links and guide links and a second series of links having drive links and guide links wherein the first series and the second series are interleaved along a chain direction so that links of the second series are positioned between and extending adjacent to links of the first series. Luce further discloses the links of the first series and the links of the second series pivotally connected to one another via pins extending through apertures in each link but does not disclose said drive links defining teeth on a first side of said drive links and

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drive flanks on a second side opposite of said first side of said drive links. However, Kozakura et al. teaches in figures 1-3, a transmission chain comprising drive links wherein each drive link includes two teeth (t) on a first side of said drive link which define a region therebetween to accept a sprocket tooth and includes two drive flanks (not numbered) on a second side opposite said first side of drive link. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Luce in view of the teachings of Kozakura et al. to include teeth on a first side of the drive links to more securely engage the transmission chain to the sprocket and to include drive flanks on the drive links on a side opposite a side defining teeth so as to enable the transmission chain to drive sprockets with both a first toothed side of the chain and a second drive flanked side of the chain.

Regarding claims 11 and 12, there is reason to believe, based on the similarity of material and structure, that the functional limitation that the drive links provide uniform stiffness across the row of links may be an inherent characteristic of the reference combination set forth above. [W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied upon. *In re Best*, 562 F.2d 1252, 195 USPQ 430, 433 (CCPA 1977). Accordingly, the burden is placed upon the applicant to prove that such a limitation is not an inherent characteristic of the reference combination.

Response to Arguments

4. Applicant's arguments with respect to claims 1,4,5,11, and 12 have been fully considered but they are not persuasive. As presently claimed, claim 1, does not limit the teeth of the drive links of

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the first and second series to extend in the same direction but merely limits the teeth to extend in a direction that is perpendicular to both the chain direction and to the first and second lateral directions. The term "front" in conjunction with "direction" in line 14 of claim 1 is not construed to limit the teeth of all the links to extend in the *same* direction. The term "front" merely provides a name to the direction of teeth projection, i.e., a direction that is perpendicular to the chain direction and to the first and second lateral directions is a *front* direction. "Therefore, the teeth of one series can extend in a first direction and the teeth of the other series can project in a direction opposite said first direction. As such the teachings of Belcher are applicable.

5. Applicant's arguments with respect to claims 6 and 8 have been fully considered but they are not persuasive. The teachings of Kozakura et al. are relied upon to show a double sided chain wherein teeth of all the links extend in the same direction. The spacing and location of guide links within the disclosed chain of Kozakura et al. do not narrow that teaching.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

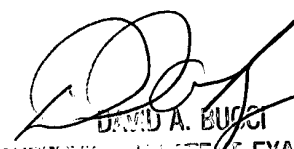
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McAnulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.1113.

tpm

23 March 2004


DAVID A. BUCCI
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 3600
3/24/04